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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,445	09/01/2004	Toshiaki Kurachi	5077-00219/NP	9981

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EXAMINER	
TRAN, THUY V	
ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/506,445	KURACHI ET AL.	
	Examiner	Art Unit	
	Thuy V. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed 09/27/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *09/27/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This is a response to the Applicants' Request for Continued Examination (RCE) filed on September 27th, 2005. In virtue of this request, claims 1-13 remain pending in the instant application.

Request for Continued Examination Entered

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 09/27/2005 has been entered.

Upon reconsideration, the indicated allowability of claims 1-13 in all the previous Office Actions is hereby withdrawn in view of the teachings of newly discovered prior art to Houkes et al. (U.S. Patent No. 4,727,294) and Nishio et al. (U.S. Patent No. 6,781,315 B2). The rejections are being made as follows:

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

> *This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later*

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houkes et al. (U.S. Patent No. 4,727,294) in view of Nishio et al. (U.S. Patent No. 6,781,315 B2).

** Applicants are noted that the following rejections to the claims are made in the order of the claims dependency.*

With respect to claim 1, Houkes et al. discloses, in the figure, a self-ballasted electrodeless fluorescent lamp comprising (1) a luminous bulb [1] in which a luminous gas containing at least mercury is enclosed (see col. 2, lines 53-54; col. 3, lines 46-47) and which has a cavity portion [3] (see the figure), (2) an induction coil [5] inserted in the cavity portion [3], (3) a high-frequency electrical supply unit (situated in [8, 9]; see col. 2, lines 16-18 and 63) electrically connected to the induction coil (via [T, 41]; see Figs. 3-4), (4) a case [8, 9] in which the supply unit is placed, and (5) a base [10] attached to the case [8, 9] and electrically connected to the supply unit; wherein (i) a ballast circuit (which is high-frequency electrical supply unit; see col. 2, line 63) for supplying high frequency power to the induction coil [5]; (ii) the luminous bulb [1] includes an approximately spherical outer tube [1] (see the figure; col. 3, line 45) and an inner tube [3] defining the cavity portion; (iii) a connection wire [6, 7] (see col. 2, lines 61-63) for electrically connecting the induction coil [5] and the supply unit extends from one end of the induction coil [5] into a region beyond an outer edge of the cavity portion [3], and is connected to the supply unit; and (iv) the connection wire [6, 7] is placed so as to be spaced apart from a sealing portion [2] of the outer and inner tubes (see the figure; col. 2, lines 55-56). Houkes et al. does not explicitly teach a circuit board, which is placed approximately horizontally when a central axis of the inner tube is placed vertically, and on which the supply unit is formed and connected to the base.

Nishio et al. discloses, in Figs. 9-11, a self-ballasted fluorescent lamp comprising a circuit board [24], which is placed approximately horizontally when a central axis of the inner tube is placed vertically, and on which a supply unit [16] is formed and connected to a base [12] (see col. 23, lines 27-34).

It would have been obvious to one of ordinary skills in the art at the time the invention was made to implement the self-ballasted electrodeless fluorescent lamp of Houkes et al. by additionally installing a circuit board which is placed horizontally when the central axis of the inner tube is placed vertically so as to form the supply unit thereon and to connect to the base and thus to reduce the overall size of the lamp since such an arrangement of the circuit board for the stated purpose has been well known in the art as evidenced by the teachings of Nishio et al. (see col. 1, line 12; col. 6, lines 34-67).

With respect to claim 2, the combination of Houkes et al. and Nishio et al. disclose that the lamp further comprises a bobbin [4] including a winding rod [core 4] (see Houkes et al.; col. 2, line 57) around which the induction coil [5] is wound, and a base portion [10] which is placed approximately at a right angle with respect to the winding rod and which supports the winding rod (core 4), wherein the winding rod [4] of the bobbin is inserted in the cavity portion, the base portion [10] of the bobbin is disposed between the luminous bulb [1] and the circuit board (which is of the combination of Houkes et al. and Nishio et al.), and the connection wire [6, 7] extends from the one end of the induction coil [5] so as to pass on or above a surface of the base portion [10] which is located close to the luminous bulb [1].

With respect to claim 5, Houkes et al. discloses a protrusion (which is made of a conductor [13] and an external conductive layer [12] on the side facing the base [10]; see col. 3,

lines 5-16), which is formed on the base portion [10], and which allows the connection wire [6, 7] to be disposed spaced apart from the sealing portion [2].

With respect to claim 3, Houkes et al. discloses in the figure that part of the case [8, 9] supports part of the luminous bulb [1], and the structure in which the connection wire is disposed spaced apart from the sealing portion [2] is realized by lifting with the case [8, 9] the luminous bulb [1] in a direction opposite to the base [10].

With respect to claim 4, Houkes et al. discloses in the figure that an upper end of the case [8, 9] supports part of the luminous bulb [1] in such a manner to lift the luminous bulb [1] in a direction opposite to the base [10], thereby allowing the connection wire [6, 7] to be disposed spaced apart from the sealing portion [2].

With respect to claim 6, the combination of Houkes et al. and Nishio et al. disclose a film capacitor (constituted by layers [12, 13]; see Houkes et al.; col. 3, line 61 – col. 4, line 2), which is a circuit element included in the ballast circuit, is disposed on a surface of the circuit board which is located close to the base [10].

With respect to claim 8, the teachings of the combination of Houkes et al. and Nishio et al. do not refer to a distance between the connection wire [6, 7] and the sealing portion [2] which is 0.3 mm or more. However, this difference is not of patentable merit since one of ordinary skills in the art would have known that heat conduction on the connection wire during operation may cause damage to the sealing portion and such that the two elements need to be spaced apart from each other as far as necessary. Therefore, to place the connection wire and the sealing portion of the combination of Houkes et al. and Nishio et al. apart from each other at least 0.3

mm or more to avoid heat conduction from the wire that would affect the sealing portion of the lamp would have been deemed obvious to a person skilled in the art of electric lamp.

With respect to claim 9, the combination of Houkes et al. and Nishio et al. inherently teach that the greatest length of the circuit board is 60 mm or less (see Nishio et al.; col. 26, lines 54-59).

With respect to claim 10, Houkes et al. discloses neither phosphor nor protective coating is applied to an inner wall of the sealing portion [2].

With respect to claim 7, the combination of Houkes et al. and Nishio et al. discloses all of the claimed subject matter, as expressly recited in claim 1, except for the output and input terminals provided in the circuit board being separate from each other by 15 mm or more. However, this difference is not of patentable merit since one of ordinary skills in the art would have known that the conducted interference may occur if the input and output terminals are too close to each other and such that the input and output terminals need to be spaced apart from each other as far as necessary. Therefore, to place the input and output terminals of the combination of Houkes et al. and Nishio et al. apart from each other by 15 mm or more to avoid the conducted interference that would affect the luminance of the lamp would have been deemed obvious to a person skilled in the art of electric lamp.

With respect to claim 11, the teachings of the combination of Houkes et al. and Nishio et al. do not refer to a distance between the connection wire [6, 7] and the sealing portion [2] which is 0.3 mm or more. However, this difference is not of patentable merit since one of ordinary skills in the art would have known that heat conduction on the connection wire during operation may cause damage to the sealing portion and such that the two elements need to be spaced apart

from each other as far as necessary. Therefore, to place the connection wire and the sealing portion of the combination of Houkes et al. and Nishio et al. apart from each other at least 0.3 mm or more to avoid heat conduction from the wire that would affect the sealing portion of the lamp would have been deemed obvious to a person skilled in the art of electric lamp.

With respect to claim 12, the combination of Houkes et al. and Nishio et al. inherently teach that the greatest length of the circuit board is 60 mm or less (see Nishio et al.; col. 26, lines 54-59).

With respect to claim 13, Houkes et al. discloses neither phosphor nor protective coating is applied to an inner wall of the sealing portion [2].

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/12/2005

THUY V. TRAN
PRIMARY EXAMINER